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EXAMINER

LAM, DANIEL K

ART UNIT	PAPER NUMBER
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2667

DATE MAILED: 02/17/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/682,183

Applicant(s)

HOFFMANN, KLAUS

Examiner

Daniel K Lam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

- On page 8, paragraph 0036, line 5, reference numeral 58 should be 48 instead.
- On page 10, paragraph 0044, line 10, there are extra characters "10".
- On page 12, paragraph 0052, line 3, the response message 114 is called ATM.

However, in fig. 2, the same response message 114 is called APM.

- In claim 3, lines 1 and 3, "transmitting" should be "receiving" since the method involving receiving data packet from a packet network.

Corrections are required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 6, 7, 9, 11-16, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by U. S. Pat. No. 6,614,781 issued to Elliott et al.

Regarding claims 1 and 18, Elliott et al. discloses a method and a program, which carries out the execution the method, of transmitting voice over various types of telecommunication networks comprising:

- Setting up a user voice connection via a SIGNALING network 114 connected to a signaling host SS7GW 208 (setting up a connection by using a signaling protocol); see fig. 11A, fig. 22B reference 2202, and col. 21, lines 26-28.
- Transmitting user data via carrier facility CF 126 and DS3 trunk toward the PSTN INTERFACE CARD 1102 (transmitting the user data via a transmission link of a circuit-switched network); see fig. 11A and col. 65, lines 60-63.
- Converting user voice data to data packet via DSP-BASED ENCODE/DECODE 1108 (distributing the user data to data packets); see fig. 11A and col. 66, lines 1-3.
- Forwarding packetized user voice data to the IP network via IP INTERFACE CARD 1112 (forwarding the user data via a packet transmission network if the user data are typical of voice transmission); see fig. 11A, and col. 66, lines 5-9.
- Ingress side user data are passed through DATA DETECTION 1146 for detecting voice data packet and silence suppression SILENCE DETECTION/SUPPRESSION 1150 (checking for silence intervals only if a voice transmission link has been set up and forwarding no user data via the packet transmission network if the user data are typical of silence intervals) so that the transmitting side does not send user data if silent interval is detected; see fig. 11B, and col. 67, lines 33-36.
- The signaling unit PERFORM[S] INITIAL DIGIT ANALYSIS 2204 and RETRIVE[S] ORIGINATING TRIGGER PLAN 2206 for determining the type of

call, among a plurality of call attributes (determining, via at least one signaling unit included in the connection set up, the type of connection); see fig. 22B, col. 21, lines 31-46, and col. 67, lines 15-20.

Regarding claim 6, in addition to disclose the limitations regarding claim 1, Elliott et al. further discloses two independent signaling units, namely SS7GW 208 and SS7GW 308, for handling signaling. Furthermore, the connection type of the calling party is obtained from the carrier facility, CF 126, or from the trigger plan 290, at the originating side. The connection type of the called party is obtained from the carrier facility, CF 130, or triggering plan 296, at the terminating side (the type of connection is determined in at least two signaling units involved in the connection set up independently of one another, and no signaling with respect to the type of connection is carried out between the signaling unit); see fig. 23A, and col. 203, lines 48-57.

Regarding claim 7, in addition to disclose the limitations regarding claim 1, Elliott et al. further discloses that the carrier facilities, CF 126 and CF130, and signaling gateways, SS7GW 208 and 308, utilize the standard ISUP of SS7 protocol for signaling (the signaling protocol is one of the ISUP protocol or the Q.931 protocol, and a parameter in which the type of connection is specific is read in the signaling unit for determining the type of connection); see fig. 23A, and col. 33, lines 6-14.

Regarding claims 9 and 11, in addition to disclose the limitations regarding claim 1, Elliott et al. further discloses that the DSP-BASED ENCODE/DECODE 1108 (check for silence intervals is carried out as a function of a message of the signaling unit to at least one interworking unit which is connected between the transmission link and the packet transmission network; claim 9), which is located between the TDM BUS 1104 and PACKET BUS 1110, is responsible for converting digital voice into packetized voice and silence data packets before forwarding to the IP network (data packets are transmitted according to the Internet Protocol; claim 11); see fig. 11A, and col. 67, lines 41-47.

Regarding claim 12, in addition to disclose the limitations regarding claim 1, Elliott et al. further discloses that the method uses carrier facility, CF 126 connecting to the PSTN INTERFACE CARD 1102 via DS3 trunk (the transmission link is formed by a time slot); see fig. 11A, and col. 65, lines 60-63.

Regarding claim 13, in addition to disclose the limitations regarding claim 1, Elliott et al. further discloses using G.711 standard for coding user data; see col. 66, lines 1-3.

Regarding claims 14 and 16, Elliott et al. discloses the an exchange unit and an interworking unit comprising:

- A carrier facility CF 126 connecting to a SIGNALING network 114 at one end and a calling party 102 at the other end (An access unit which signals in accordance with a protocol for circuit-switched data networks; claim 14); see fig. 11A, and col. 65, lines 52-58.

- A Trunking Gateway 232 connecting calling party 102 via carrier facility 126 with DS3 trunk at one end and connecting to a IP data network via a IP INTERFACE CARR 1112 at the other end. The Trunking Gateway 232 embedded with a DSP-BASED ENCODE/DECODE 1108 which converts digital voice data to voice packet and silence packet (A control unit transmits user data to an interworking unit which is connected between a circuit-switched network and a packet network; claim 14. A conversion unit in between circuit and packet networks, and a control unit forwards no user data during silence interval; claim 16); also see fig. 11A, and col. 65, lines 52-58.

Regarding claim 15, in addition to disclose the limitations regarding claim 14 discussed in the previous paragraph, Elliott et al. further discloses, after the signaling process, the Trunking Gate 232 instructs the DSP-BASED ENCODE/DECODE 1108 to convert digital voice into packetized voice or silence data packets before forwarding to the IP network (one of the signaling unit and the interworking unit initiates, as a function of the type of user data, measures via which no data packets are transmitted in silence intervals); see fig. 11A, and col. 67, lines 41-47.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a

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whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-5, 8, 10, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable U. S. Pat. No. 6,614,781 issued to Elliott et al. in view of RFC 1890 written by Schulzrinne et al.

Regarding claim 2, although Elliott et al. discloses the limitations related to claim 1 discussed in the previous paragraph, they do not explicitly indicate the method further comprising the steps of:

- Indicating in the data packets and via a value of at least one bit position, that further data packets are following.
- Transmitting at least one data packet which contains a different value at the bit position if a silence interval is detected.

Schulzrinne et al. discloses, for the voice application that sends no data during silence interval, the first packet of a talk spurt, or first packet after a silence period, is distinguished by setting the marker bit in the RTP data header. See Section 4.1, lines 1-4. Therefore, it would have been obvious to those having ordinary skill in the art, at the time of invention, to incorporate a flag in the data packet so that the transmitter can tell the receiver whether the data packet is a voice packet or a silence packet. As a result, during silence interval, which can be 50% of the channel bandwidth, the channel can be used by other services as taught by Elliott et al. See col. 3, lines 51-54.

Regarding claims 3 and 17, Elliot et al. discloses the method and an interworking unit comprising:

- Receiving IP packet containing voice data packet via the IP INERFACE CARD 1112 which is connected to the IP network (Transmitting user data in data packets in a packet transmission network; claim 3); see fig. 11A, and col. 66, lines 5-9.
- Using a DSP-BASED ENCODE/DECODE 1108 to convert packetized voice data packet into digital voice data (Depacketizing user data; claim 3. A conversion unit that depacketizes user data; claim 17); see fig. 11A, and col. 67, lines 41-47.
- Transmitting the digital voice data to the user via the PSTN INERFACE CARD 1102 (Forwarding user data via a transmission link of a circuit-switched network; claim 3); see fig. 11A and col. 65, lines 60-63.

Furthermore, Schulzrinne et al. discloses the steps of using the marker bit in the RTP header for indicating voice data packet or silence data packet (Via a value of at least one bit position in the data packet to indicate whether the data packet is a voice packet or silence packet; claim 3. A control unit that detects silence packet; claim 17). See Section 4.1, lines 1-4.

Regarding claim 4, in addition to disclose the limitations regarding claim 3 discussed in the previous paragraph, Elliott et al further discloses the INSERTION OF COMFORT NOISE 1126 at the egress side when a silence packet is detected (signaling the presence of silence interval to the circuit-switched data transmission network in a different way); see fig. 11C, and col. 67, lines 55-61.

Regarding claim 5, in addition to disclose the limitations related to claim 3 discussed in the previous paragraph, Elliot et al. further discloses

- The signaling unit PERFORM[S] INITIAL DIGIT ANALYSIS 2204 and RETRIVE[S] ORIGINATING TRIGGER PLAN 2206 for determining the type of call, among a plurality of call attributes (a connection is set up by using a signaling protocol, at least one signaling unit included in the connection setup determines the type of connection); see fig. 22B, and col. 21, lines 31-46.
- If the DATA DETECTION 1146 for detects voice data packet, then the packet is forwarded to the silence suppression SILENCE DETECTION/SUPPRESSION 1150 (check for silence intervals is only performed when a voice transmission link has been set up); see fig. 11B, and col. 67, lines 15-21, and lines 33-36.

Regarding claim 8, in addition to disclose the limitations related to claim 2 discussed in the previous paragraph, Schulzrinne et al. further discloses the bit position is a marker bit according to an RTP transmission protocol. See Section 4.1, lines 1-4.

Regarding claim 10, in addition to disclose the limitations related to claim 1 discussed in the previous paragraph, Schulzrinne et al. further discloses the default packetization interval of 20 milliseconds for both data and silence packets (a silence interval is detected when no user data typical of voice transmission are transmitted for at least 20 milliseconds); see page 5, paragraph 4, lines 1-5.


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Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel K. Lam whose telephone number is (703) 305-8605. The examiner can normally be reached on Monday-Friday from 8:30 AM to 4:30 PM.

If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (703) 305-4378. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.

DKL: dkl 
February 11, 2004



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